# SOCIAL AND BEHAVIORAL DETERMINANTS IN PUBLIC HEALTH: CURRENT PERSPECTIVES

*Haliza Mohd. Riji**

## ABSTRACT

*This paper highlights the importance of recognizing behavioral determinants in public health. Public health has evolved over the decades from those that focused on disease prevention to the all encompassing health promotion which places the interactive nature of participating components. Public health occurs within cultural contexts within which social and behavioral factors play important roles. Though it has long been recognized that people's socioeconomic status, attitude and behavior hinder them from using the health services, the challenge to bring forth greater equity and centrality of people in public health remains to be realized. In the meantime, health professionals have to increase their health literacy – knowing and learning more about the people's perspectives. Topics of past and current importance that require more concern and research in public health are compliance, stigma, gender, health education messages. Finally, a call for multidisciplinary approaches in public health is made.*

## BEHAVIOURAL DIMENSIONS IN PUBLIC HEALTH

For decades the mission of public health has been dominated by the goal of disease elimination and health promotion. In reality there remains the challenge to understand the causes of disease occurrence and the barriers to health. Among determinants of illness and disease are socioeconomic status (SES) and behavioral factors. Poverty is not only a predisposing factor to ill health, but restricts people from participating in decisions that affect their health. Hence a call for greater equity of health would require for a restatement of the centrality of people in public health and its practice. What are needed now are new forms of communication and cooperation at all levels of society to ensure equitable distribution of knowledge and views to effectively address inequalities and improve well-being. Public health from the western scientific perspectives tends to place people's health development within the context of differences in traditions, lifestyle and local economy all of which contribute to the character of people's health and public health solutions.

## HEALTH LITERACY

In order for public health to be more effective adequate understanding of people's perspectives of health must be obtained and transformed into programs that are accepted and acted upon by community members. Working with the community has to be seen as a process involving stages of communication, learning and decision-making skills, group dynamics, and participation. In short, health literacy is a condition that would determine the individual's health or illness behavior and ultimately his/her health outcome.

## SOCIAL BEHAVIORAL SCIENCE AND PUBLIC HEALTH

In very broad terms, public health is the knowledge about the health of populations and organized activity to control the spread of disease and promoting community health through population-based approaches. Public health is concerned with prevention of diseases so that community health is maintained, and this is achieved through environmental, occupational, social, behavioral contexts. The scope of public health today has expanded to include social problems such as drug addition, tobacco smoking, sexual and child abuse, homelessness, road accidents.

## THE NEW PUBLIC HEALTH

Previous approaches into looking at public health practices, have since then been reviewed and with the "new public health" the emphasis is on health promotion which had its beginning in the Ottawa Charter in 1986. The new in the "new public health" is in fact not entirely new, but is a legacy of previous approaches to health promotion. The change toward a new perspective was brought about by the increase in knowledge about health and disease, the emergence of new threats and the increase in people's concern about their human rights.

* *Department of Community Health, Faculty of Medicine and Health Sciences, UPM Serdang*

## THE CULTURAL CONTEXT OF PUBLIC HEALTH

The new public health is giving more importance to correcting the underlying factors that influence individual and community health. More and more emphasis is being given to the role of cultural context, social organization, and lifestyle choices for individual health. The new expanded focus of public health today is the result of the shift in epidemiological patterns caused primarily by industrialization and urbanization. The diseases of today's societies need different strategies compared to the more traditional methods of dealing with the morbidity and mortality situations affecting societies previously. The major illnesses affecting today's industrialized or urbanized populations, such as heart disease, diabetes, cancer require primary preventive measures by individuals that depend on behavioral practices such as regular exercise, stress reduction, diet plan, and quit smoking.

## WHAT IS HEALTH/WELLNESS?

The meaning of health is never fixed – always open to various interpretations. The lay people may think they are healthy if they are not seriously ill. Some other people think that they are healthy if they rarely visit the hospital, yet some others call themselves to be healthy if no misfortune happens to them. Still others regard themselves in a healthy state if they are actively engaged in some vocational or professional activities. In reality, health is a cultural construct, that is, it is a subjective concept depending on situation, time and perception. Actually, the concept of health is rooted in culture. People may not define health in relation of disease. Instead they may express in terms of spiritual, social, psychological or cognitive dimensions.

## HEALTH ACCORDING TO PROFESSIONALS

To borrow from the definition given by the Joint Committee on Health Education Terminology (1991, quoted in Anspaugh et al 2000 p. 3), health is "an integrated method of functioning which is oriented toward maximizing the potential of which the individual is capable. It requires that the individual maintain a continuum of balance and purposeful direction with the environment where he (she) is functioning". This goes on well with the concept of wellness which calls for a multidimensional approach in the pursuit for an optimal quality of life.

## UNDERSTANDING HEALTH AND DISEASE

As varied as the interpretations of health by cultures and groups, so are the approaches adopted in attempts to understand health and disease. In dealing with communicable diseases public health practitioners commonly use epidemiology to characterize people, place and time factors involved. The aim in epidemiological analysis has always been to illustrate the relationships between the host (people), agent (e.g. virus) and the environment (place). The role of social and cultural characteristics in disease etiology cannot be shown to be significant unless it is adequately studied. The need to better understand the relationships between biological and social or behavioral determining factors brought about other models.

### **(a)** Social-Ecological Model

The social-ecological model was an extension of the ecological model or epidemiological model which illustrated the linkage between essential characteristics of agent (cause) host (person), and environment. Health as conceived by this model is the result of having a balance between the host and the agent, with environment as the fulcrum. The social-ecological model places disease within the context of today's disease pattern, which indicate that there are more than one cause of disease. In other words, disease phenomenon is the outcome of a myriad of factors which act on the individual. The model is derived from the general systems theory, which looks at disease and health within a system that is composed of mutually interacting component. The underlying principle is the process that takes place in order to achieve an equilibrium – the key elements at work are integration, change and adaptation. Ideally there should be perfect balance, but in reality there is always imperfectness as systems are open to changes all the time, hence the process of adjustment and adaptation is virtual.

### **(b)** Illness-Wellness Continuum Model

Just as there are many interpretations of illness so are there variations in the understanding of health or wellness. This model conceives health as a continuum of conditions that can happen to an individual from premature death to optimum wellness. Taking a central point as a state of neutral wellness whereby no discernible illness or wellness is noticed, and individual then moves to a better state of health or a worse state. This model does not only consider physical health but

psychological aspects of health as well. Boredom, depression, tension, anxiety are emotional states that can influence physical and mental health. Health is a condition that is marked by not only an absence of disease but beyond health, that is wellness-enhancing actions, and healthy communities. The same goes for community health. Wellness as viewed from this model regards health as a dynamic state that will stimulate the individuals to go beyond the neutral point into 'high level wellness' when emotional and psychological needs are met such as greater self-acceptance, caring and affection form friends and family (Internet source).

( c) The Health Impact Model

The health impact model looks at antecedents and responses to health problems. Antecedents are factors that happen before an occurrence of disease and responses refer to what is being done, either intentional or otherwise, to the condition. The model allows the illness phenomenon to be viewed as a process of 'before' and 'after' situation. Four categories of antecedents are (i) ideology (ii) behavior (iii) social structure, and (iv) technology . Similarly, the responses can be categorized into the four types. Ideology is about people's beliefs, attitudes and values, while behavior are people's actions and activities, social structure is the kind of relationships people establish within the groups, and technology is the way people make use of knowledge and equipment and appliances in their day to day life or for some specific purpose. Symptoms and signs are used to interpret and classify illness and disease and determine what actions to take.

## WHAT INFLUENCES HEALTH?

According to Doyle and Ward (2001), individual and group health could actually be considered a web, where many issues and aspects of life are interwoven and interconnected, all influencing each other and overall health. It is evident that behavioral choices affect health. Examples of bad behavioral choices are smoking, drug abuse, over or under-eating. The authors view health as being influenced by (a) immediate factors (b) social influences (c) global influences. Responses are actions that are usually triggered by signs and symptoms, which are determined by the beliefs system of individuals and groups.

(a) Knowledge, Attitude, Beliefs, Confidence, **and Culture**

Immediate influences come from personal knowledge, attitudes, and beliefs and confidence in one's ability to perform a particular health behavior; life values that affect decision making; and the degree to which one is influenced by significant people in one's life (culture and ethnicity).

(b) Social Influences and Health

Social indicators are always used by researchers to measure community health. Population characteristics such as literacy rates, employment, marriage and divorce rates, and school attendance are reflections of the community's health status. Of late crime rates and social problems may be linked to health issues. Drug abuse is frequently associated with family instability due to divorce, and in turn divorce can be the outcome of unemployment. The relationship among factors is in fact circular and reciprocal in nature. Health reflects the condition of society, on the other hand society's condition reflects the health situation of the people.

( c) Global Influences

Each society lives with its cultural values and practices. Studies have shown how disease and health are affected by cultural perspectives. Family systems, social relationships, economic activities, entertainment are all organized through norms and beliefs. Advances in communication and travel technology have made it possible for people to borrow, assimilate or integrate cultural values and practices. For example the consumption of fast food is so widespread that one sometimes forget where it originates.

## CAPITALIZING ON SOCIAL BEHAVIORAL SCIENCE TO IMPROVE PUBLIC HEALTH

Public health today should integrate traditional methods of understanding population health which depend on to one-to-one behavioral interventions with more broad-based initiatives that consider the full range of factors that affect health of individuals and groups – families, schools, workplaces. Prevention efforts that mostly address risks for specific diseases or illnesses in a categorical fashion have a tendency to downplay the behavioral and social risks that affect conditions and disabilities. Therefore

health and disease interventions should address generic social and behavioral determinants of health.

## SOCIAL BEHAVIORAL RESEARCH IN PUBLIC HEALTH

### (a) COMPLIANCE IN TREATMENT

Adherence or compliance with treatment regimens poses a major yet complex challenge in the tuberculosis control program. An underlying assumption in compliance is patient will adhere to his 'doctor's instructions to clinic visits and medication. However, as numerous studies have shown compliance is a complex behavioral process strongly influenced by not only the clinic setting, health carer's attitude, but also by patient's home environment. Among theoretical models used to explain adherence are the Health Belief Model (HBA), Theory of Reasoned Action (TRA), Theory of Planning Behavior, and Models of Illness Behavior.

### (b) A STUDY ON NON-COMPLIANCE IN LEPROSY TREATMENT

In a multicentered study between defaulters and non-defaulters in TB treatment, it was found that there were no major differences in terms of socio-economic background. Defaultation seemed to have been influenced by lack or absence of family or social support, inability to attend an appointment when patient was on travel, and not getting the fund for transportation. In. view of these, it made sense that if the physician and other health care providers and the health care organization make appropriate strategies then the patients would better comply with the recommendations made. In assuming that this takes place, the patient has the requisite knowledge, motivation, skills, and resources to follow the recommendations. It also appeared that non-compliance is far more prevalent and varied than initially supposed. Obviously more effective interventions are needed to address the issues. It would then be necessary to evaluate existing models and research related to compliance, determine if sufficient data exist to make specific recommendations (including future research) to enhance compliance. Relevant data are needed in view of TB as a reemerging disease resulting from the influx of foreign workers.

### (c) STIGMA

Compliance study in leprosy treatment can ultimately lead to the recognition that stigma is an important factor in its prevention. Although leprosy centers have long been abandoned and leprosy is treated together with other skin diseases, leprosy is still much feared by the public and the healthcare providers. The National Leprosy Control Centre at Sg. Buloh, Selangor, Selangor, for example had long been gone and the hospital compounds are now substituted with business activities centering around the growing and sale of potted plants. Despite this one is still reminded of surviving inmates when they visit the hospital area or when they watch them on the television's special program. A quick observation around the skin clinic at the General Hospital indicate that leprosy patients tend to be conscious of the people around them despite the fact they do not have any deformities.

To formulate effective disease prevention strategies, public health professionals have to distinguish features of stigma that are amenable to study and which can be useful in policy and management of diseases with strong attachment of stigma such as leprosy and HIV/AIDS.

### (d) SOCIAL BEHAVIORAL FACTORS IN HIV/AIDS

Medically, AIDS is an infection caused by the virus HIV. Although it develops gradually, it is lethal as there is no cure at present. Its spreads into epidemic proportion especially among disparate social groups is very much related to behavioral practices such as sexual activities among gay men and sharing of infected needles among drug addicted persons. Controlling the disease through behavioral change poses major challenges to public health practitioners. It is evident that behavioral factors are the key determinants of infection and prevention. Closely related to the behavioral risk factors are the social responses to the disease - moral condemnation and stigmatization, two main obstacles preventing the infected from coming forward to get medical treatment. Social and behavioral determinants are shown in studies among heterosexuals and other groups which also indicate the association of social and economic characteristics such as poverty, marginalized groups, living in crowded cities groups, and working as sex workers and infections. It is clear that AIDS prevention need both proximal and contextual interventions. Contextual interventions will have to consider formal and informal organizations since they are important components within social and physical environments, and they exert influences in people's choices of behavior at organizational, community, work place and societal levels.

## (f) FACTORS FAVOURING VECTOR-BORNE DISEASES

Transmission of malaria is very much related to occupational activities in areas that expose forested land to sunshine and rain thus creating sites suitable for the breeding of vector mosquitoes. People living in such areas for long or short duration face the risks to infective bites unless they have developed immunity to the disease. Common preventive strategies recommended by public health workers are the use of mosquito nets(impregnated or otherwise), use of insect repellants (e.g. Body cream or wrist bands), fixing windows and doors with nets. Controlling the spread of the disease particularly among mobile population such as the *Orang Asli* groups of Peninsular Malaysia has led to the promotion of primary health care workers who are given the tasks of diagnosing blood specimens and referring the infected to health workers for medication. Dealing with the vectors of dengue infections require other measures to suit their habitats and biting activities. As the *Aedes agypti* favor clear water and flourish in dense human settlements, elimination of breeding sites necessitate human participation. While development goes on at a rapid rate numerous pools of stagnant water are created at construction sites. In residential areas occupants leave their compound with waste and empty containers that not only invite rodents but make them conducive for vector mosquitoes to lay their eggs, thus adding to the density of vector population in specific environment. Workers, school children, and residents in urban settlements hence become infected with dengue or dengue haemorrhagic fever even though they might not harbor the vectors within their immediate vicinity.

## COMMUNICATING HEALTH WITHIN CULTURES

Meanings are embedded in cultural codes, symbols, and values. In preparing health education materials, health educators must examine health behaviors in particular cultures to ensure their appropriateness. Many health education programs today take the form of physical vision as opposed to mental vision. Communication is pushed through the use of transparencies and slide projectors. In fact, these have become the primary tool of communication while the speaker serves only secondary function.

## SELF-EMPOWERMENT APPROACH TO POSITIVE HEALTH

An alternative approach to the preventive-medical and the radical-political approaches used in public health is the self-empowerment method. This approach is believed to be more effective as it facilitates choices for individuals and communities. It works on the assumption that the individuals are able to make use of their knowledge and beliefs and are able to interpret their actions. In short an approach is more likely to be accepted if it is based on *cultural sensitivity* which means that behavioral change is planned within the cultural framework of communities and not based on Western perspectives.

## MAKING HEALTH MESSAGES UNDERSTOOD

Health messages are to convey the concerns of health professionals about disease and health care. As such they are often based on the assumptions that the individuals and groups reading them have no difficulty understanding their meanings. In increasing the effectiveness of health messages, designers can adopt communication, psychological and social learning theories such as the Bullet Theory and Cognitive Learning Theory, or use strategies based on audience behavior. Theories are greatly needed for "Theories help us make sense of many interrelated phenomena and predict behavior or attitudes that are likely to occur when certain conditions are met:...Building and evaluating theory is therefore one of the most important objectives of social science." (Schutt 2001: 36) Changing behavior through the use of messages is a complicated matter. Despite the large quantity of printed materials available on risk behaviors such as smoking or unsafe sex, it is still not known whether any significant behavior change has occurred among at -risk groups or whether people now practice more healthy lifestyle. Using television as a medium for conveying messages to the masses is thought of a better choice since they involve people. Although in theory the "Mass media can be extremely powerful in involving audiences with the abstract matters of health in exciting personalized ways..." (Mandelsohn 1968 in Parrot 1995), motivation and attention to them is partly influenced by the audience's level of involvement with the topic of the message. Of late the health messages on the risks of smoking are frequently shown on television. Ironically, the percentage of young smokers in the country is alarming and the sale of tobacco and cigarettes has not really been much affected by warnings about it danger. Something about the messages

and related strategies to reduce cigarette smoking that have not been effective enough to make those involved not motivated to change their habits.

## CALL FOR INTERDISCIPLINARY RESEARCH IN PUBLIC HEALTH

Since it is realized that disease and health involve interactive factors within physical, cultural, economic and political contexts it makes sense that multidisciplines must get involved in research. New disease phenomena such as HIV/AIDS is a clear example that warrant interdisciplinary fields. In the case of diseases that are still puzzling the medical experts, such as cardiovascular diseases, collaborative research into all the likely factors must be encouraged as current preventive strategies and cure have not been able to significantly reduce the incidence. A good reason for interdisciplinary collaborations is to provide the basis for a better understanding the conditions for effective interventions. Many a health interventions have failed because they are designed from the perspectives of a single or two disciplines that take part in the health intervention program. More importantly the people whom the program is to change must understand and participate if they are to understand why they have to alter their behavior. There are growing evidence to show that social and behavioral science play a critical role in public health. Social science disciplines such as anthropology, sociology and psychology have had a long association with epidemiology and have been able to illustrate how disease and ill health can be better explained through in-depth studies on culture, social relationships and the individual's psychological traits. The call for social and behavioral research also means that more use of qualitative methodology is made . A fine example of this is currently an IRPA-funded study by researchers at four higher learning institutions in Peninsular Malaysia, namely USM (P.Pinang and Kelantan), UM, UKM. In an attempt to better understand .why there is still a low rate of women who go for Pap Smear screening, the research team is using grounded theory to establish key behavioral factors that promote or deter women from undergoing a Pap Smear test. The use of grounded theory will provide an opportunity for new theories relating to cancer among women (personal communication). The methodology used is mainly qualitative using in-depth interviews with six categories of respondents. The researchers comprise social scientists, epidemiologists, family health physicians, public health nurses, and cancer specialists. An area in public health that is not to be ignored is the use of traditional or complementary medicine. More widely acknowledged as complementary and alternative medicine (CAM) by WHO and other health authorities, the subject has attracted social scientist, clinicians, public health practice, ethno-botanists, and various researchers in alternative medicine practitioners to find out about the pattern of utilization, reasons for use, essential ingredients and characteristics, and their effectiveness in curing specific illnesses. A local plant that has been dubbed the 'Malaysian Ginseng', *Eurocoma longifolia* has been he subject of various studies and media highlights over several years. Although its aphrodisiac properties have been proven in experimental studies on mice, its effectiveness on humans have not been conclusively confirmed through clinical trials. Just recently its medicinal properties will be shown in the studies on hepatitis B, followed by those on cancer, diabetes, dengue and malaria (The Star 19th October 2004). Nevertheless, numerous products that are claimed to contain the miraculous power of *Tongkat Ali* roots are now widely sold in Malaysia. Despite the advance of modem medicine the use of traditional and alternative medicine by all levels of society should be of concern to public health practitioners. In other contexts it is called complementary health. Its significance can be gauged by such developments as its integration into nursing education (Richardson in J *Holistic Nursing* 2003). A collaborative effort to understand its potentials as a health tourism attraction is presently being undertaken by six research institutions, and the research is funded by IRPA. This goes to show that the area of traditional and complementary medicine is here to stay and will contribute greatly to the health and commercial sector.

## CONCLUSIONS

Interdisciplinary research will increase knowledge and enrich participants' skill because it 'always involves a learning process...' (Kessel et al 2003). If public health is to move toward building healthy communities through its organized efforts, then those who wish to see this outcome should go for unifying values, unifying goals, and unifying strategies (McBeth & Schweer 2002). The unifying goal for Malaysia is to become a developed nation by 2020, and to achieve this Malaysians have to be healthy citizens. It is clear that health professionals alone cannot fulfill the vision. All sectors have to contribute in the public health practice; more parties have to take part in the unifying mission, which is to realize the strategies. Bearing in mind that today's challenges are vastly different from

those that face health practice in the 19th century, strategies which deal with more effective prevention through "influencing of individuals in such a way as to bring about changes in values, attitudes, beliefs and ultimately habits and lifestyles" are more likely to succeed. (Dickson et al 1997).

**REFERENCES**

Anspaugh Dj, Dignan Mg, Anspaugh SL (2000). ***Developing health Promotion Programs.*** McGraw-Hill Higher Education.

Black N, Boswell D, Gray A, Murphy S, POPAY J (1984). ***Health and Disease: A Reader.*** Open University.

Dickson D, Hargie O, Morrow N (1997). ***Communication Skills Training for Health Professionals.*** 2nd Edition. Chapman and Hall